What is claimed is:

1. A tuner comprising:

an RF input;

a signal level controller coupled to attenuate a signal from the RF input;

a feedback amplifier coupled to provide first and second outputs representing power of the attenuated signal;

a mixer coupled to mix at least one of the outputs of the amplifier with a local oscillator signal; and,

a feedback coupled to control the attenuation provided by the signal level controller in response to the power of the attenuated signal.

2. The tuner of claim 1 wherein the mixer comprises:

a filter arranged to receive a signal from the at least one of the first and second outputs of the amplifier; and,

a mixer coupled to mix an output of the filter with the local oscillator signal.

3. The tuner of claim 2 wherein the filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a frequency range specified for a receiver incorporating the tuner.

4. The tuner of claim 1 wherein the feedback comprises a phase compensator arranged to compensate for a phase shift caused by the amplifier.

5. The tuner of claim 4 wherein the mixer comprises:

a filter arranged to receive a signal from the at least one of the first and second outputs of the amplifier; and,

a mixer coupled to mix an output of the filter with the local oscillator signal.

6. The tuner of claim 5 wherein the filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a frequency range specified for a receiver incorporating the tuner.

7. The tuner of claim 1 wherein the mixer comprises first and second mixers, wherein the first mixer is coupled to mix an RF signal with a first local oscillator signal to produce an initial intermediate frequency signal, and wherein the second mixer is coupled to mix the initial intermediate frequency signal with a second local oscillator signal to produce a final intermediate frequency.

8. The tuner of claim 7 wherein the first mixer is coupled upstream of the amplifier, and wherein the second mixer is coupled downstream of the amplifier.

9. The tuner of claim 7 wherein the feedback comprises a phase compensator arranged to compensate for a phase shift caused by the amplifier.

10. The tuner of claim 9 wherein the first mixer is coupled upstream of the amplifier, and wherein the second mixer is coupled downstream of the amplifier.

11. The tuner of claim 1 wherein the mixer comprises first and second mixers and first, second, and third filters, wherein the first filter is coupled between the signal level controller and the first mixer, wherein the first mixer is coupled to mix an output of the first filter with a first local oscillator signal to produce an initial intermediate frequency, wherein the second filter is coupled between the first mixer and the amplifier, wherein the third filter is coupled between the amplifier and the second mixer, and wherein the second mixer is coupled to mix an output of the third filter with a second local oscillator signal to produce a final intermediate frequency.

12. The tuner of claim 11 wherein the first filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a range specified for a receiver incorporating the tuner, wherein the second filter comprises a wideband filter, and wherein the third filter comprises a narrowband filter.

13. The tuner of claim 11 wherein the feedback comprises a phase compensator arranged to compensate for a phase shift caused by the amplifier.

14. The tuner of claim 13 wherein the first filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a range specified for a receiver incorporating the tuner, wherein the second filter comprises a wideband filter, and wherein the third filter comprises a narrowband filter.

15. The tuner of claim 1 wherein the signal level controller comprises an attenuator.

16. The tuner of claim 15 wherein the attenuator comprises a PIN attenuator.

17. The tuner of claim 1 wherein the signal level controller comprises a gain controllable amplifier.

18. The tuner of claim 1 further comprising:

a first RF filter between the RF input and the signal level controller;

a second RF filter between the signal level controller and the mixer;

a wideband IF amplifier between the mixer and the feedback amplifier;

a narrowband IF amplifier at an output of the feedback amplifier, wherein the signal level controller comprises a gain controllable amplifier.

19. A tuning method comprising:

attenuating an RF signal received at an RF input;

mixing the attenuated signal with a local oscillator signal to produce an intermediate frequency signal;

developing a signal representing the power of the attenuated signal; and,

controlling the attenuation of the RF signal in response to the signal representing the power of the attenuated signal so as to inhibit overloading of the mixer.

20. The tuning method of claim 19 wherein the developing of a signal representing the power of the attenuated signal comprises amplifying the attenuated signal to produce a first signal representative of a voltage of the attenuated signal and a second signal representative of a current of the attenuated signal, and wherein the mixing of the attenuated signal with a local oscillator signal comprises mixing at least one of the first and second signals with a local oscillator signal.

21. The tuning method of claim 20 wherein the controlling of the attenuation comprises phase compensating for a phase shift caused by the amplifying of the attenuated signal.

22. The tuning method of claim 19 wherein the mixing comprises:

filtering at least one of the first and second signals with a filter; and,

mixing the filtered one the first and second outputs of the filter with the local oscillator signal.

23. The tuning method of claim 22 wherein the filter comprises a broadband filter.

24. The tuning method of claim 19 wherein the developing of a signal representing the power of the attenuated signal comprises amplifying the attenuated signal to produce a first signal representative of a voltage of the attenuated signal and a second signal representative of a current of the attenuated signal, and wherein the mixing of the attenuated signal with a local oscillator signal comprises mixing at least one of the first and second signals with a local oscillator signal.

25. The tuning method of claim 24 wherein the controlling of the attenuation comprises phase compensating for a phase shift caused by the amplifying of the attenuated signal.

26. The tuning method of claim 24 wherein the filter comprises a broadband filter.

27. The tuning method of claim 26 wherein the controlling of the attenuation comprises phase compensating for a phase shift caused by the amplifying of the attenuated signal.

28. The tuning method of claim 19 wherein the mixing comprises mixing the RF signal with a first oscillator signal to produce an intermediate frequency signal and mixing the intermediate frequency signal with a second oscillator signal to produce a final intermediate frequency signal.

29. The tuning method of claim 28 wherein the developing of a signal representing the power of the attenuated signal comprises amplifying the intermediate frequency signal to produce a first signal representative of a voltage of the attenuated signal and a second signal representative of a current of the attenuated signal.

30. The tuning method of claim 29 wherein the controlling of the attenuation comprises phase compensating for a phase shift caused by the amplifying of the attenuated signal.

31. The tuning method of claim 19 wherein the mixing of the attenuated signal with a local oscillator signal comprises:

filtering the attenuated signal in a first filter;

mixing an output of the first filter with a first local oscillator signal to produce an initial intermediate frequency signal;

filtering the initial intermediate frequency signal in a second filter;

amplifying an output of the second filter to produce first and second signals;

filtering one at least of the first and second signals in a third filter; and,

mixing an output of the third filter with a second local oscillator signal to produce a final intermediate frequency.

32. The tuning method of claim 31 wherein the first filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a frequency range specified for a receiver incorporating the tuner, wherein the second filter comprises a wideband filter, and wherein the third filter comprises a narrowband filter.

33. The tuning method of claim 31 wherein the controlling of the attenuation comprises phase compensating for a phase shift caused by the amplifying of the output of the second filter.

34. The tuning method of claim 33 wherein the first filter comprises a broadband filter arranged to filter out signal components having frequencies outside of a frequency range specified for a receiver incorporating the tuner, wherein the second filter comprises a wideband filter, and wherein the third filter comprises a narrowband filter.

35. The tuning method of claim 19 wherein the attenuating of an RF signal received at an RF input comprises attenuating of an RF signal received at an RF input using an attenuator.

36. The tuning method of claim 35 wherein the attenuator comprises a PIN attenuator.

37. The tuning method of claim 19 wherein the attenuating of an RF signal received at an RF input comprises attenuating an RF signal received at an RF input using a gain controllable amplifier.